

IN THE CLAIM

Claims 1, 4-11, 13-15, 21-25, 28, 31, 35-40 have been
rewritten as follows:

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Q 1. (Amended) A data storage card comprising
a substrate having first and second edge;
a data surface region located on said substrate
between said first and second edges, said data surface region
comprising a magnetic storage medium having at least one layer
of high density, high coercivity magnetic material for storing
magnetic signals, said data surface region being configured to
be used in an environment wherein particles and debris may
become affixed to the data surface region and said data surface
region is capable of having such particles and debris removed
therefrom.

2. The data storage card of claim 1 wherein said at least one
magnetic material layer is a thin film layer of high density, high coercivity
magnetic material having a predetermined magnetic field orientation for
storing data.

3. The data storage card of claim 1 wherein said at least one layer
of magnetic material is form of nickel-cobalt.

4. (Amended) The data storage card of claim 1 wherein said at least one layer of magnetic material is form of plated nickel-cobalt.

5. (Amended) The data storage card of claim 1 wherein said at least one layer of magnetic material is form of sputtered nickel-cobalt.

6. (Amended) The data storage card of claim 1 wherein said substrate is moved relative to a data processing station.

7. (Amended) The data storage card of claim 1 wherein a data processing station is moved relative to said substrate.

8. (Amended) The data storage card of claim 1 wherein a data processing station and said substrate are moved relative to each other.

9. (Amended) The data storage card of claim 1 wherein said substrate is substantially planar and generally rectangular in shape and said data surface region is generally rectangular in shape.

10. (Amended) The data storage card of claim 9 wherein said substantially planar and generally rectangular shaped

substrate including said data surface region is transported past a data processing station.

11. (Amended) A portable data storage card adapted to be used in a card processing system having a data processing station comprising

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a data storage device adapted to interact with a data processing station when a portable data storage card and a data processing station are moved relative to each other, said data storage device including

a glass substrate having a predetermined shape; and
at least one layer of high density, high coercivity magnetic material for storing magnetic signals, said data storage device being configured to be used in an environment wherein particles and debris may become affixed to the surface region of said data storage device and said surface region is capable of having such particles and debris removed therefrom prior to said portable data storage card and a data processing station being moved relative to each other.

12. The portable data storage card of claim 11 wherein said at least one magnetic material layer is a thin film layer of high density, high

coercivity magnetic material having a predetermined magnetic field orientation for storing data.

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13. (Amended) The portable data storage card of claim 11 wherein said substrate has two surfaces and a protective coating is applied to at least one of said two surfaces for resisting abrasion during use in an environment wherein particles and debris may become affixed to a surface having said protective coating applied thereto to enable removal of such particles and debris therefrom prior to said portable data storage card and a data processing station being moved relative to each other.

14. (Amended) The portable data storage card of claim 11 wherein said substrate has two surfaces and wherein said data storage device is located on the other of said two surfaces and a protective coating is applied to at least said data storage device for resisting abrasion during use in an environment wherein particles and debris may become affixed to a surface having said protective coating applied thereto to enable removal of such particles and debris therefrom prior to said portable data storage card and a data processing station being moved relative to each other.

15. (Amended) The portable data storage card of claim 11 wherein a protective coating is applied to at least said data storage device to resist abrasion during use in an environment wherein particles and debris may become affixed to a surface having said protective coating applied thereto to enable removal of such particles and debris therefrom prior to said portable data card interfacing with and be responsive to a data processing station when said substrate and data processing station are moved relative to each other to position said substrate proximate said data processing station to enable data flow therebetween.

16. The portable data storage card of claim 11 wherein said substrate is moved relative to said data processing station.

17. The portable data storage card of claim 11 wherein said data processing station is moved relative to said substrate.

18. The portable data storage card of claim 11 wherein said data processing station and said substrate are moved relative to each other.

19. The portable data storage card of claim 11 wherein said substrate is substantially planar and generally rectangular in shape and said data storage device is generally rectangular in shape.

20. The portable data storage card of claim 19 wherein said substantially planar and generally rectangular shaped substrate including said data storage device is transported past a data processing station.

21. (Amended) The portable card of claim 11 wherein said at least one layer of high density, high coercivity magnetic material is a sputtered layer.

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22. (Amended) The portable card of claim 11 wherein said at least one layer of high density, high coercivity magnetic material is a plated layer.

23. (Amended) The portable card of claim 11 wherein said at least one layer of high density, high coercivity magnetic material is an oxide layer.

24. (Amended) The portable card of claim 11 wherein said at least one layer of high density, high coercivity magnetic material is a web coated layer.

25. (Amended) A card and card writer/reader system comprising

an encodeable card having

a body having upper and lower surfaces and side and end edges, said body including on at least one of said upper and lower surfaces a data storage section, said card being adapted

to interact with a data processing station having a transducer when said card and said data processing station are moved relative to each other to at least one of write encoding signals in said data storage section and read encoded signals from said data storage section, said data storage section including

a glass substrate; and

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at least one layer of high density storage material for storing data, said at least one layer of high density storage material being configured to be used in an environment wherein particles and debris may become affixed thereto and said at least one layer of high density storage material is capable of having such particles and debris removed therefrom.

26. The card and card writer/reader system of claim 25 wherein said an encodeable card is a magnetically encodeable card and wherein said data storage section has at least one thin film layer of high density, high coercivity magnetic material having a predetermined magnetic field orientation for storing data.

27. The card and card reader system of claim 26 wherein said transducer is a thin film head.

28. (Amended) A card and card writer/reader system comprising

a magnetically encodeable card having

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a body having upper and lower surfaces and side and end edges, said body including on at least one of said upper and lower surfaces a data storage device adapted to interact with a data processing station when said card and said data processing station are moved relative to each other, said data storage device including at least one thin film layer of high density, high coercivity magnetic material having a predetermined magnetic field orientation for storing data, said data storage device region being configured to have a surface region which may be used in an environment wherein particles and debris may become affixed to the surface region and data storage device is capable of having such particles and debris removed therefrom;

a first transducer for reading said magnetically encoded signals from said data storage device during relative movement of said card relative to the data processing station to enable data flow between said data storage device and said transducer; and

a second transducer for writing magnetically encoding signals in said data storage device as magnetically encoded

signals during relative movement of said card relative to the data processing station to enable data flow between said data storage device and said transducer.

29. The card and card writer/reader system of claim 28 wherein said transducer is an inductive head.

30. The card and card writer/reader system of claim 28 wherein said transducer is a thin film magnetic head.

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31. (Amended) A method for reading a card with a card reader comprising the steps of

forming on a glass substrate of a card a data storage section having a data surface region comprising a magnetic storage medium having at least one layer of high density, high coercivity magnetic material for storing magnetic signals adapted to interact with a data processing station when said card and said data processing station are moved relative to each other to at least one of write encoding signals in said data storage section as encoded signals and read encoded signals from said data storage section, said data storage section being configured to be used in an environment wherein particles and

debris may become affixed to the data surface region and said data storage section is capable of having such particles and debris removed therefrom; and

moving said card and data processing station relative to each other to interface said data storage section relative to a transducer to enable data flow therebetween.

32. The method of claim 31 wherein the step of forming includes forming a data storage device having at least one thin film layer of high density, high coercivity magnetic material having a predetermined magnetic field orientation for storing data.

33. The method of claim 32 wherein said step of moving includes using a transducer that is an inductive head.

34. The method of claim 32 wherein said step of moving includes using a transducer that is a thin film head.

35. (Amended) A method for reading a card with a card reader comprising the steps of

forming on a glass substrate of a card a data storage section including a thin film of magnetic material having a predetermined magnetic orientation for storing data in a predetermined axis, said data storage section being configured to be used in an environment wherein particles and debris may

become affixed thereto and said data storage section is capable of having such particles and debris removed therefrom; and

moving said card and data processing station relative to each other to interface said data storage section relative to a transducer to enable data flow therebetween.

36. (Amended) A data storage device comprising

a glass substrate;

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at least one layer of high density, high coercivity magnetic material formed on said glass substrate for storing data; and

a non-magnetic layer formed on said magnetic layer, said at least one layer of non-magnetic material being configured to be used in an environment wherein particles and debris may become affixed thereto and said data storage device is capable of having such particles and debris removed therefrom.

37. (Amended) A data storage device comprising

a glass substrate;

a substrate having at least one surface;
at least one high density magnetic material layer disposed on said substrate for storing magnetic signals with the coercive

material axis of magnetization oriented in a predetermined direction relative to said at least one surface of said substrate, said at least one high density magnetic material layer being configured to be used in an environment wherein particles and debris may become affixed thereto and said data storage device is capable of having such particles and debris removed therefrom.

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38. (Amended) A magnetic signal processing apparatus comprising

a magnetic recording medium having

a glass substrate;

a high density magnetically coercive material for storing magnetic signals with the coercive material axes of magnetization oriented in a predetermined direction; and

a non-magnetic layer formed on said magnetically coercive material, said at least one layer of non-magnetic material being configured to be used in an environment wherein particles and debris may become affixed thereto and said magnetic recording medium is capable of having such particles and debris removed therefrom;

a magnetic transducer positioned relative to a surface of said recording medium for transferring signals with respect to the recording medium; and

a drive member operatively coupled to at least one of said transducer and said recording medium to provide relative movement therebetween.

39. (Amended) A method of processing magnetic signals using a magnetic recording medium having a high density magnetically coercive material for storing magnetic signals with the coercive material axes of magnetization oriented in a predetermined direction comprising the steps of:

providing a glass substrate for supporting said high-density magnetically coercive material;

providing on said glass substrate a layer of high density magnetic material; and

providing a non-magnetic layer of material on said magnetic layer of material, said non-magnetic layer of material being configured to be used in an environment wherein particles and

debris may become affixed thereto and said non-magnetic layer of material is capable of having such particles and debris removed therefrom.

40. (Amended) A system comprising
a magnetic recording medium having

a glass substrate;

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a high density magnetically coercive material for
storing magnetic signals formed on said glass substrate with the
coercive material axes of magnetization oriented in a
predetermined direction:


a non-magnetic material disposed on said high density
magnetically coercive material, said non-magnetic material being
configured to be used in an environment wherein particles and
debris may become affixed thereto and said non-magnetic layer of
material is capable of having such particles and debris removed
therefrom; and

a drive member operatively coupled to at least one of a
transducer and said recording medium to provide relative
movement therebetween.

Please add the following new claims 41 through 55:

41. A data storage card adapted to be used in a card processing system having a data processing station, said data storage card comprising

a data storage device adapted to interact with a data processing station when a portable card and a data processing station are rotationally moved relative to each other, said data storage device including

 a substrate formed of a non-magnetic material having a predetermined shape; and

at least one layer of magnetic material for storing magnetic signals, said at least one layer of non-magnetic material being configured to be used in an environment wherein particles and debris may become affixed thereto and said non-magnetic layer of material is capable of having such particles and debris removed therefrom.

42. The data storage card of claim 41 wherein said at least one magnetic material layer is a thin film layer of high density, magnetic material having a predetermined magnetic field orientation for storing data.

43. The data storage card of claim 41 wherein said substrate non-magnetic material is selected from the group consisting of a glass substrate, a glass-ceramic substrate, crystallized glass substrate, an aluminum substrate, a ceramic substrate, a carbon substrate, a silicon substrate and a resin substrate.

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44. The data storage card of claim 41 wherein said data storage card and said data processing station are moved relative to each other along a first path.

45. The data storage card of claim 42 wherein said first path is a substantially straight path.

46. The data storage card of claim 42 wherein said first path is a substantially curved path.

47. The data storage card of claim 41 wherein said data storage card and said data processing station are moved relative to each other along a substantially arcuate path.

48. The data storage card of claim 41 wherein said data storage card and said data processing station are rotated relative to each other along a substantially arcuate path.

49. The data storage card of claim 41 wherein said data storage card is rotated relative to said data processing station.

50. The data storage card of claim 41 wherein said substrate is substantially planar and generally rectangular in shape and said data storage device is generally rectangular in shape.

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51. The data storage card of claim 41 wherein said substrate is substantially planar and generally rectangular shaped substrate and said data storage device is rotated relative to a data processing station.

52. The data storage card of claim 51 wherein said substantially planar and generally rectangular shaped substrate including said data storage device are rotatable proximate a data processing station.

53. A method for reading a card with a card reader comprising the steps of

forming on a substrate of a card a data storage section wherein said data storage section has a surface region which is configured to be used in an environment wherein particles and

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debris may become affixed to the surface section and said data storage section is capable of having such particles and debris removed from the surface region and wherein at least one of said card and said data storage section is adapted to be rotated about its central axis relative to a data processing station to at least one of write encoding signals in said data storage section as encoded signals and read encoded signals from said data storage section; and

rotating said at least one of said card and said data storage section about its central axis to position said data storage section relative to said data processing station to interface said data storage section relative to a transducer to enable data flow therebetween.

54. The method of claim 53 wherein said step of rotating includes moving a transducer relative to the data storage section.

55. A method for reading a card having a generally rectangular shape with a card reader comprising the steps of

forming on a substrate of a card a data storage section including a layer of magnetic material having a predetermined

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magnetic orientation for storing data in a predetermined axis,
said data storage section having a surface region which is
configured to be used in an environment wherein particles and
debris may become affixed to the surface section; and
rotating at least one of said card and said a data storage
section about its central axis relative to a data processing
station to interface said data storage section relative to a
transducer to enable data flow therebetween.

ADDITIONAL FEES

Three (3) additional independent claims at a small entity
fee of \$42.00 totaling \$126.00 and fifteen (15) additional
claims in excess of twenty claims at a small entity fee of \$9.00
totaling \$135.00 have been added by this amendment and a check
in the amount of \$261.00 is enclosed herewith covering the fees
for the additional claims. No additional fees are deemed due
herein. However, if any fees are required for any reason,
please charge the same to Deposit Account No. 13-2515.